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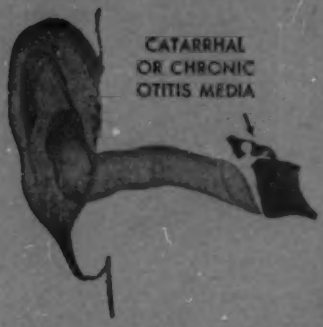

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SPEECH DISCRIMINATION IN CENTRAL AUDITORY LESIONS*

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It has been suggested recently that the relation between the discrimination score and the threshold loss of hearing for speech might aid in the diagnosis between cochlear lesions and those of the auditory tract central to the end organ.

Dix, Hallpike and Hood[1] stated that in cases of tumor of the VIIIth Nerve intelligibility for speech increased with amplification whereas the opposite was true in cases of cochlear hydrops. Eby and Williams[2] reported five cases of VIIIth Nerve tumors which seemed to justify the conclusions of Dix, *et al.*, and one of us (T.E.W.)[3] suggested that the relation of the threshold loss for speech to the discrimination score might be a differential diagnostic point between end organ and central lesions.

Lidén,[4] on the other hand, in a study with Swedish language material, reporting on seven tumors, stated that "All of the tumor cases showed conspicuously poor discrimination, the articulation score usually being worse than might have been supposed from the pure tone audiogram."

Schuknecht and Woellner[5] reported two cases of VIIIth Nerve tumors which showed a moderate threshold loss with very poor discrimination.

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It is our purpose in this communication to report four cases with central lesions which demonstrate findings in support of Lidén's and Schuknecht's experiences.

EQUIPMENT AND PROCEDURES.

Thresholds for pure tones were measured with an ADC-Microtone Type 53-C audiometer fitted with Permoflux (PDR-10) earphones and calibrated in accordance with the American Standard Specification for Audiometers (ASA Z24.5-1951). The results in all cases are expressed in decibels relative to normal hearing. The procedure for measuring the pure-tone threshold was a standard clinical one in which the tone was interrupted manually, and the threshold was approached both from above and below at least three times.

The masking source was a white noise with a uniform spectrum in the band 20-7000 cps. The level of masking used in any given instance is expressed in overall sound pressure level (db above 0.0002 microbar).

Hearing loss for speech was measured with CID Auditory Test W-2, a set of recordings of English spondaic words, the intensity of which decreases automatically on the record. The hearing loss for speech is expressed in each case as the difference in decibels between the intensity required by the patient and the intensity required by a normal listener to repeat correctly 50 per cent of such words.

Speech discrimination scores were obtained by presenting recorded PB lists (Rush Hughes PB-50 Auditory test), each consisting of 50 difficult monosyllabic words, at a level 40 db or more above the patient's threshold for speech. This is sufficient to establish a PB maximum score. The speech discrimination score is expressed in per cent words correctly repeated. The sound-pressure-level in db (re 0.0002 microbar) at which each PB test was given is indicated.

Recruitment was explored with an alternate binaural loudness balance method. The loudness was balanced at sensation levels of 20, 40, 60, 70, 80 db, etc., and at each sensation level from three to five judgments of equal loudness were obtained for both ascending and descending approaches. The patient listened to as many pairs of tones as he wished before judging

the tones as same or different. For these measurements, as for the diplacusis measurements, the equipment employed consisted of a two-channel electronic switch with one channel fed by a General Radio Beat-Frequency Oscillator (713 B), and the other by a Hewlett-Packard Audio Oscillator (Model 200-BR). Control attenuators and two Permoflux (PDR-10) earphones completed the equipment. In the cases defined as non-recruiting, the sound-pressure-level difference at the high sensation levels was approximately equal to the difference at threshold.

Case 1: L. B., white female, age 34, was seen by the department of Neurosurgery presenting a two-year history of decreased hearing in the left ear, a one-year history of staggering gait and several months' history of numbness on the right side of the face. Nystagmus was observed on either lateral gaze, there were left cerebellar signs, bilateral papilledema, right facial weakness and a diminished right corneal reflex. X-ray studies were negative.

Audiometric Data:

Frequency	250	500	1000	2000	3000	4000	6000	8000
Right, air	–5	–5	10	5	5	0	10	5
Left, air	60	65	65	45	40	50	40	40
bone		40	50 ↓	50 ↓	35	50 ↓		

	Hearing Loss for Speech	Speech Discrimination
Right	11 db	86% at 90 db SPL

For the left ear, speech at 120 db SPL with 90 db masking in the opposite ear was unintelligible. The patient could hear something, but she could understand nothing. She commented: "It sounds loud, but I cannot understand it. It all sounds the same. It's not so loud as the right ear (90 db.)" There was no recruitment at 3000 cps. Diplacusis was observed with 2300 to 2500 cps on the left ear judged equal in pitch to 3000 cps on the right ear. The left pure-tone thresholds, air and bone, were measured with 90 db masking in the right ear.

Operative Data:

"The left cerebellopontine angle was explored . . . there was a large tumor lying in the region of the VIIIth Nerve which extended up to the tentorium and also extended down along the margins of the IXth, Xth, and XIth Nerve complex almost to the foramen magnum . . . it extended up to the tentorium and into the incisura, and it extended around anteriorly almost to the opposite side of the pons . . . There was a nubbin of tumor in the internal auditory canal." The final diagnosis was left VIIIth Nerve neurilemmoma.

Case 2: D. H., white male, age 54, was seen by the department of Neurosurgery. Six years prior to examination, following influenza, the patient had a first episode of dizziness and staggering gait accompanied by sudden onset of tinnitus and loss of hearing in the right ear. The dizziness and staggering gait cleared in approximately two weeks, but

the tinnitus and hearing loss persisted. There had been occasional intermittent episodes of vertigo and headache since then. Three months prior to examination the patient experienced a recurrence of staggering gait and severe right headache which extended from the occiput to the angle of the right mandible. The headaches were aggravated by sudden movements of the head. The vertigo was initiated or aggravated by sudden movement of the head and accentuated by emotional stress. Bilateral papilledema was observed. There was nystagmus on right lateral gaze, a diminished right corneal reflex and a right facial weakness. Ice water caloric showed a very faint response on the right with an active response on the left. X-rays were negative.

Audiometric Data:

Frequency	250	500	1000	2000	3000	4000	6000	8000
Right, air	80	85	80	75	80	80	80↓	80↓
bone		50↓	50↓	50↓	50↓	50↓		
Left, air	0	10	15	10	20	20	15	5
bone		10	10	25	25	20		

	Hearing Loss for Speech	Speech Discrimination
Left	20 db	84% at 90 db SPL

For the right ear, speech at 120 db SPL with 100 db masking in the opposite ear was unintelligible. The patient complained of headache, and although he was cooperative, he was not thoroughly convinced of the value of the tests since he felt that his right ear was not functioning at all. There was no diplacusis and no recruitment in the right ear at 2000 cps. The right pure-tone thresholds, air and bone, were measured with 100 db masking in the left ear.

Operative Data:

" . . . removal of a very large VIIIth Nerve tumor on the right. The tumor extended from below the XIth Nerve rostrally into the incisura and laterally into a moderately dilated internal auditory canal. It had a broad-based attachment against the brain stem. The tumor involved the entire cerebello-pontine angle." The final diagnosis was right VIIIth Nerve neurilemmoma.

Case 3: L. R., white male, age 54, was first seen by one of us (T.E.W.) complaining of dizzy spells, loss of hearing, and tinnitus in the left ear. The tinnitus was described as a "roar" or "buzz." He also reported severe headaches from time to time. Tinnitus was first noted five years prior to his examination here, and three years prior to examination he noticed a loss of hearing in the left ear. Attacks of vertigo had occurred two years and again nine months prior to examination, both of these attacks being severe. For the two months previous to his examination he had had frequent dizzy spells, and these had increased in severity. The responses to hot and cold water were about equal for the two ears. X-rays showed no abnormalities. His EEG demonstrated a very mild mixed dysrhythmia. The spinal fluid protein was elevated (41 mg. per cent). The patient was referred to the Department of Neurosurgery.

Audiometric Data:
3/10/53

Frequency	250	500	1000	2000	3000	4000	6000	8000
Right, air	10	15	10	5	45	55	65	55
bone		15	0	10	45	50↓		
Left, air	40	35	40	55	55	65	75	80
bone		40	35	50↓	50↓	50↓		

	Hearing Loss for Speech	Speech Discrimination
Right	15 db	84% at 90 db SPL 82% at 90 db SPL
Left	47 db	44% at 90 db SPL 40% at 120 db SPL

A left partial recruitment was measured for 2000 cps in which a 50 db difference at threshold was reduced to a 20 db difference at 80 db above threshold. A diplacusis was observed in which 2000 cps on the right ear was judged equal to 1550 to 1700 cps on the left ear. The right bone and the left air and bone pure-tone thresholds were measured with 90 db masking in the opposite ear. The left speech discrimination scores were measured with 70 and 100 db masking, respectively.

4/9/53	Hearing Loss for Speech	Speech Discrimination
Right	14 db	78% at 90 db SPL
Left	64 db	0 at 120 db SPL 0 at 100 db SPL

The left speech threshold was measured with 80 db masking. The left speech discrimination scores were measured with 100 and with 80 db masking, respectively.

Audiometric Data:
4/17/53

Frequency	250	500	1000	2000	3000	4000	6000	8000
Right, air	15	10	5	5	50	55	75	65
bone		15	0	15	50↓	50↓		
Left, air	70	65	65	60	60	65	70	80
bone		35	50↓	50↓	50↓	50↓		

	Hearing Loss for Speech	Speech Discrimination
Right	12 db	84% at 90 db SPL
Left	68 db	8% at 120 db SPL 2% at 110 db SPL

There was a left partial recruitment at 2000 cps, a 55 db difference at threshold being reduced to a 26 db difference at 70 db above threshold. Sensation of pitch was different in the two ears: 2000 cps in the right was judged equal to 1950 to 2020 cps in the left and was described as "shrill" in the left. The patient commented regarding the PB's on the left ear at 110 db SPL: "Some come through clear, but most of them

just seem to hit the ear and bounce back—all in a jumble—they run together. They sound about as loud as on the other ear (90 db)." The bone conduction pure-tone thresholds were measured with 90 db masking; the left air conduction thresholds with 100 db masking; the left speech threshold with 80 db masking, and the left discrimination scores were obtained with 100 and 90 db masking, respectively.

Operative Data:

"Overlying the medial third of the VIIIth Nerve and internal auditory artery was an exuberant mass of choroid plexus, evidently arising from the lateral recess, which was larger than normal, and which seemed to be stuck down to the medial portion of the VIIIth Nerve and the auditory artery. Whether this in itself accounted for the patient's symptoms or not, I cannot say, but I am inclined to be somewhat suspicious . . . I could see no other evidence of abnormality . . . I debated whether to attempt to coagulate the redundant mass of choroid plexus and thus determine whether the patient's symptomatology was due to this alone; however, taking into consideration the patient's personality plus the fact that he had no serviceable hearing, I felt constrained to make certain of the results of this operation and, therefore, proceeded to section the VIIIth Nerve. At the time of discharge the patient was alert, oriented and able to walk without difficulty; there was no nystagmus. The only neurologic deficit was left nerve deafness."

Case #: G. G., white female, age 37, was seen by the department of Neurosurgery. Three years prior to examination the patient experienced difficulty in controlling her right leg and arm in walking and eating. At about the same time she experienced her first attack of vertigo in which the environment seemed to move. She felt better with her eyes closed. At the same time she also experienced diplopia and headache, which extended from the back of her head down to the neck right and left. The headaches, motor difficulty and diplopia were intermittent. The vertiginous attacks occurred about twice a month; the last bad attack a year and a half prior to examination and a milder attack about two and a half weeks prior. About two and a half weeks preceding examination, the patient noticed a right ear hearing loss and claimed that her right ear felt "closed off some." The right side of her face and the right side of her tongue became numb a few days later. There was no complaint of tinnitus. There was spontaneous nystagmus on either lateral gaze (more marked to the right) and on upward gaze. Calorics showed a right directional preponderance and a right hyperactive response.

Audiometric Data:

Frequency	250	500	1000	2000	3000	4000	6000	8000
Right, air	0	5	20	20	35	35	15	20
bone		10	25	25	20	40		
Left, air	–5	–5	0	–5	10	–5	15	5

	Hearing Loss for Speech	Speech Discrimination
Right	7 db	54% at 90 db SPL 58% at 90 db SPL
Left	2 db	88% at 90 db SPL

Recruitment was absent for the right ear at 1000 and at 4000 cps. There was an 8 to 12 db spread for equal loudness judgments at each sensation level. For the pitch judgments, 1000 cps in the left was judged equal to 900 and 1000 cps in the right, and 4000 cps in the left was judged

equal to 4200 and 4300 cps in the right. The patient commented that the PB's were clearer in the left ear, that 1000 and 4000 cps were clear in the left ear but were a buzz in the right ear—too much of a buzz, particularly for 4000 cps to be at all sure of pitch equality with the tone in the left ear. The right bone and air conduction thresholds were measured with 90 db masking in the left ear. The air conduction thresholds were the same with and without masking.

Impression: Multiple sclerosis?

DISCUSSION.

It is of central interest that speech discrimination in these cases is remarkably poor in relation to the threshold loss, and that this obtains in the absence of recruitment. Case 4 is perhaps the most striking example with hearing loss for speech of only 7 db and discrimination scores of 54 and 58 per cent. The first two cases could not discriminate any speech in the affected ear — neither the relatively easy spondees nor simple questions and instructions. The loss of sensitivity for pure tones in the speech range in these two cases is such that one would certainly predict sufficient discrimination for speech to permit at least the measurement of hearing loss for spondees. Case 3 is additionally interesting in that a partial recruitment was observed and that the surgical findings here indicated the presence of pressure on the internal auditory artery as well as the VIIIth Nerve. This agrees with the report of Dix and Hood[6] regarding recruitment in a small percentage (8 per cent) of their series of central auditory lesions in which interference with the cochlear blood supply was observed.

It is also interesting to note the presence of diplacusis in three of the cases. This is worthy of further investigation since prevalent conceptions tend to associate diplacusis with cochlear lesions. Eby and Williams,[2] for example, report diplacusis in 23 of 27 cases of end-organ deafness and in only one of 16 cases of nerve fibre deafness.

It should be noted here that in our experience cochlear lesions, as in Meniere's disease, have uniformly exhibited recruitment. Additionally, severe discrimination loss for speech is observed in cochlear lesions if the hearing loss for speech is greater than 20 db. In this connection, however, the report of Hirsh, Palva and Goodman,[7] that a low speech discrimination score is associated with recruitment if the hearing loss for speech is greater than 20 db, requires modification since

the data reported here indicate that recruitment is not a necessary condition for a poor speech discrimination score associated with a mild loss of sensitivity. While the presence of recruitment concomitant with a hearing loss for speech of greater than 20 db is usually associated with low speech discrimination, it now appears that such central auditory lesions as are represented in this study will likewise result in poor speech discrimination no matter what the hearing loss, and in the absence of recruitment.

CONCLUSIONS.

The conclusions of this report may be stated on a tentative basis subject to the obvious need for additional data: *1.* The relation between threshold loss and discrimination for speech does not differentiate between auditory lesions in the cochlea and those central to the cochlea. At the very least these observations dictate considerable caution in interpreting very poor discrimination for speech associated with moderate threshold loss as being *unrelated* to central auditory lesions. *2.* Greatly diminished discrimination for speech with moderate sensitivity loss does not necessarily predict the presence of recruitment. *3.* Recruitment is characteristically absent in central lesions, and it apparently remains as the only auditory sign which differentiates between cochlear and retrocochlear lesions.

We are indebted to Dr. Henry G. Schwartz, Professor of Neurosurgery, for making these cases available.

REFERENCES.

1. Dix, M. R.; Hallpike, C. S., and Hood, J. D.: "Nerve" Deafness: Its Clinical Criteria, Old and New. *Proc. Roy. Soc. Med.*, 42:527-536, July, 1949.

2. Eby, L. G., and Williams, H. L.: Recruitment of Loudness in the Differential Diagnosis of the End-Organ and Nerve Fiber Deafness. The Laryngoscope, 61:400-414, May, 1951.

3. Walsh, Theo. E.: Speech Audiometry. *Jour. Laryngol. and Otol.*, 67:119-126, March, 1953.

4. Liden, Gunnar: Speech Audiometry. *Acta Otolaryngol., Stockh.*, Supp. 114: p. 110, 1954.

5. Schucknecht, H., and Woellner, R.: Paper read at the Otosclerosis Study Group, Sept., 1954.

6. Dix, M. R., and Hood, J. D.: Modern Developments in Pure Tone Audiometry and Their Application to the Clinical Diagnosis of End-Organ Deafness. *Jour. Laryngol. and Otol.*, 67:343-357, June, 1953.

7. Hirsh, I. J.; Palva, T., and Goodman, A.: Difference Limen and Recruitment. *Arch. Otolaryngol.*, 60:525-540, Nov., 1954.

COMBINED DEFECTS OF THE COSMETIC PROFILE.

Corrective Rhinoplasty with Simultaneous Repair of Simple Retruded Chin.

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It is always necessary to consider the ultimate result with regard to the entire facial structure when attempting cosmetic rhinoplasty. In cosmetic rhinoplasty it is usually not sufficient to obtain a "pretty" nose. A nasal contour which is perfectly adequate for one person may be totally inadequate for another individual of differing overall facial configuration. This relationship is strikingly evidenced in what may be called the nose and chin profile.[1,2,3]

It is just as important and oftentimes more so to alter the chin in direct proportion to the nasal correction. The problem, therefore, of attempting to give the patient "a nose to fit the face" becomes twofold, and can more accurately be stated as "a nose and chin to fit the face."

There are usually two types of chins with which we are concerned, the receding (micrognathic) and the protruding (prognathic) jaw. Either one of these may or may not be associated with malocclusion. If malocclusion is present, and the patient is treated before puberty, satisfactory results can be obtained by proper orthodontic procedures in a good many cases. If, however, the patient is seen in adult life, and an appreciable degree of malocclusion is present, osteotomies, either through the ramus or through the body of the mandible, become essential. This requires interdental wiring which should remain in position approximately six to eight weeks for proper immobilization.

In cases of severe retrusion, where even osteotomy is not sufficient, an intra-oral prosthetic appliance which fits into a previously prepared epithelium-lined pocket is recommended.[4]

The protruding jaw can be corrected either by ostectomy or osteotomy. In ostectomy, a portion of bone is removed from

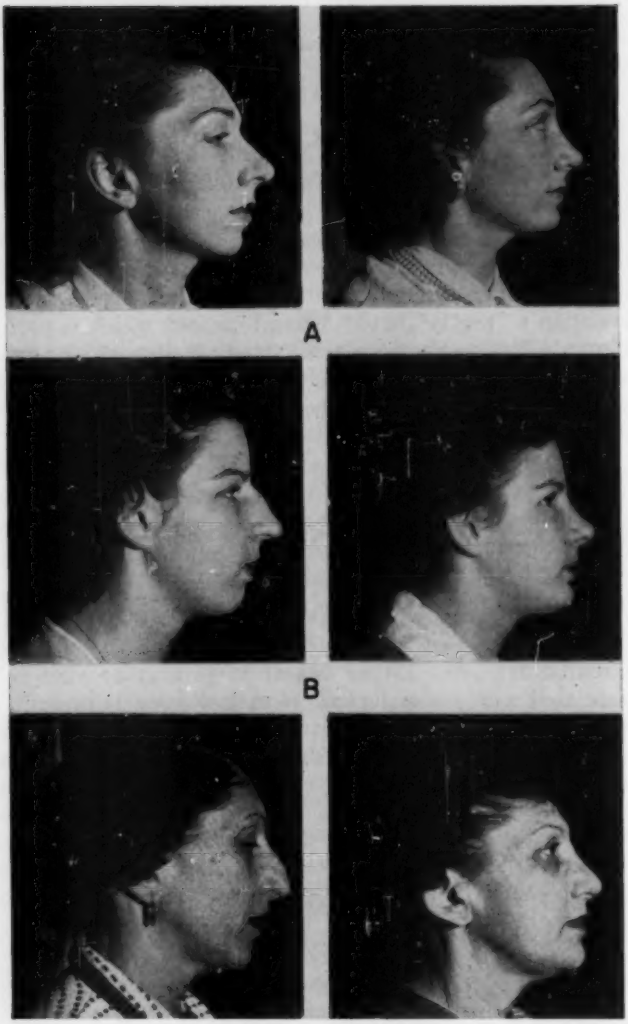

Fig. 1. A, B, and C. Rhinoplasty and chin build-up with preserved costal cartilage implant.

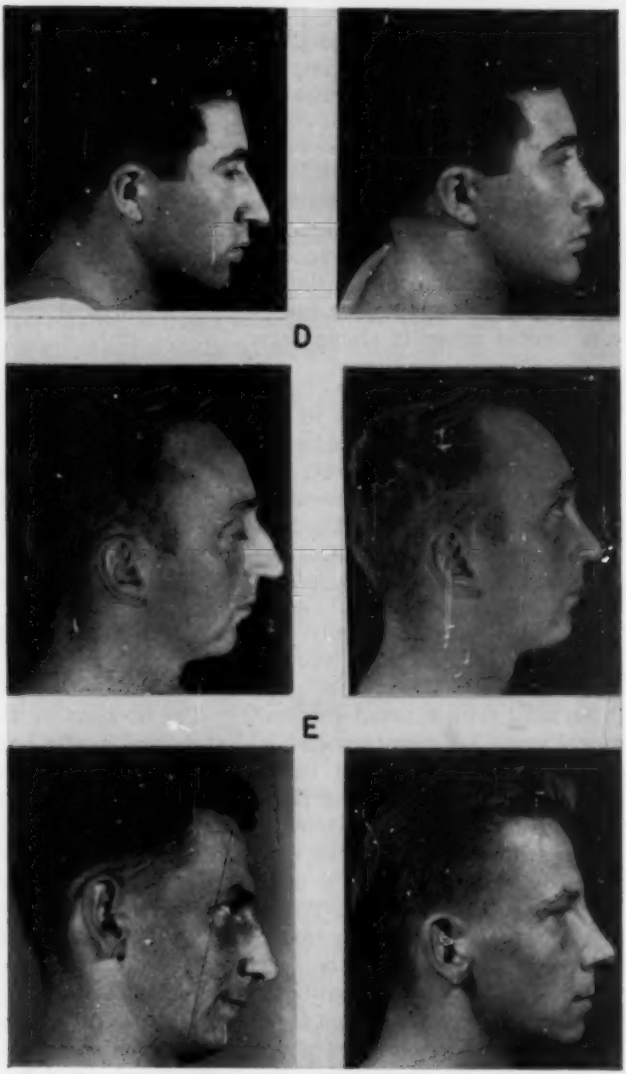

Fig. 2. D. Rhinoplasty and chin build-up with preserved costal cartilage implant.

E. and F. Rhinoplasty and chin build-up utilizing the patient's own nasal "hump."

the body, the angle or the mandibular condyle. Osteotomy is usually done through the ascending ramus of the mandible. These procedures, again, require interdental wiring and appliances.

Most of the cases seen in adult life show either a minor degree or no evidence of malocclusion, and a retruded chin. These cases, fortunately, require the simplest form of reconstruction. The results, however, are rather dramatic, as can be seen in the accompanying illustrations. Completely satisfactory results cannot be achieved when the surgical procedure is limited solely to rhinoplasty.

Correction in most of these cases can be accomplished by the use of various substances to build out the contour of the chin. Several substances have been advocated over the years. Among these, we find substances totally foreign to the human body, such as ivory, polyethylene[5,6] and methyl methacrilate.[7] These substances have the disadvantage of behaving like a foreign body and favor reaction in the tissues. Frequently, slight trauma may produce infection and cause extrusion.

Of the substances not totally foreign to the human body, we have fresh rib cartilage from the patient himself or a compatible blood relative. Autogenous cancellous iliac bone has been used with marked success.[8,9,10] Use of bone by the intra-oral route has been reported.[11] Fat-dermal grafts have also found their advocates.[12,13] This group, of course, requires the inconvenience of subjecting the patient to a separate procedure and this is usually undesirable. Most patients will consider the reconstruction of the chin and nose, but will not welcome the additional surgical procedure for the removal of costal cartilage or iliac bone. The use of bovine cartilage[14,15] has been used with apparently marked success. The cartilage is prepared commercially by the Armour Laboratories of Chicago, Illinois. It is imperative that this type of cartilage not be diced, as complete absorption is sure to follow. Autogenous rib cartilage has the tendency to curl; therefore, it has been advised that the cartilage either be diced or subjected to a double-boiler bath for at least 15 minutes.[16] This boiling will, of course, destroy the viability of the cartilage. It will,

therefore, give us a cartilage which is not better than preserved material.

Preserved cartilage is easily obtained and stored. It is usually obtained from adults, preferably in their second or third decade, who have died from causes other than tuberculosis, neoplastic or infectious disease.

The costal cartilage is removed under sterile conditions, the sections freed of perichondrium and refrigerated in individual bottles of 1:1000 aqueous solution of merthiolate. In three weeks, under sterile precautions, the cartilage is transferred to new bottles containing aqueous merthiolate solution in the strength of 1:3000. Each specimen is cultured at this time and again should be cultured prior to its utilization.

Figures E and F represent the use of nasal hump alone in reconstruction of the chin. The nasal hump is frequently used[17] either alone or with the addition of either preserved or autogenous septal cartilage. This usually does not have the bulk desired and is fairly difficult to trim properly. Costal cartilage, because of its bulk, availability and ease of handling, is the material of choice (See Figures A - D).

Correction in most of these cases is accomplished at the same time. The rhinoplasty is done first by the individually desired method and the chin reconstruction follows.

Technique consists essentially of the following:

The areas are prepared and draped in the usual manner. The chin is then anesthetized with 1 per cent procaine solution containing 12 drops of adrenalin, 1:1000 to the ounce. Anesthesia should start in the midline and be carried laterally on the bone to include the mental nerves as they exit from the mental foramina.

With a No. 15 B-P blade, an incision measuring 2-3 cm. is made at the first chin line zone until contact with bone is made. With a small periosteal elevator, the periosteum is lifted from the bone and a pocket of the desired size is made. It is very important that the subperiosteal dissection not be carried too far cephalad for fear of perforating the gingivolabial mucosa. The pocket should not be made any larger than

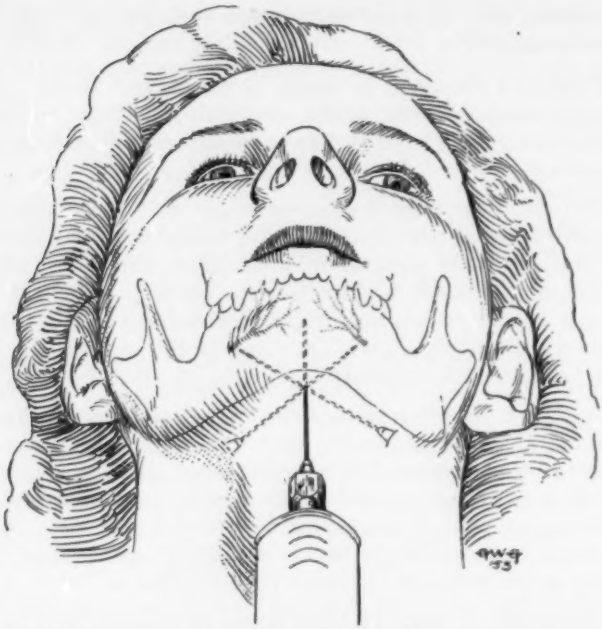

Fig. 3. Anesthesia accomplished by infiltrating in the midline and extending laterally to include the mental nerves as they exit from the mental foramina.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 4. Incision made with a No. 15 blade under the chin and carried down through periosteum.

Fig. 5. Elevating of periosteum with an elevator to create pocket for graft.

Fig. 6. Insertion of cartilage graft into pocket.

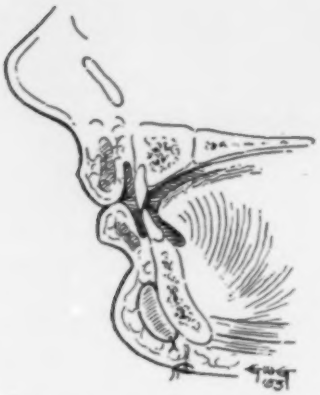

Fig. 7. Graft in situ anterior to the lower portion of the mandible.

Fig. 8. The pre and post-operative contours of Case B.

the graft. If it is made larger, the graft will have a tendency to be displaced. The graft is then inserted into the pocket and is left in contact with the bone. It is important to control all bleeding. One or two No. 000 chromic catgut sutures for approximation of periosteum and fine black silk sutures for the skin are used in closing. A pressure bandage using elastoplast (elastic adhesive) is used and left without changing approximately six days. At the end of this time, both the nasal "mask" and the chin dressing are removed, the sutures being removed also at this time. No further dressing need be applied.

This procedure offers no appreciable discomfort to the patient and is done concomitantly with the rhinoplasty; therefore, it does not prolong hospitalization and offers some of the most gratifying results both to the patient and the physician.

BIBLIOGRAPHY.

1. Aufricht, Gustave: Combined Nasal Plastic and Chin Plastic; Correction of Microgenia by Osteocartilaginous Transplant from Large Hump Nose. *Amer. Jour. Surg.*, 25:292, Aug., 1934.

2. Becker, O. J.: Rhinoplasty Combined with Reconstruction of Receded Chin. *Ill. Med. Jour.*, 93:254, May, 1948.

3. Maliniac, J. W.: Reconstruction of Deformed Chin; Its Relationship to Rhinoplasty; Dermal Graft, Procedure of Choice. *Amer. Jour. Surg.*, 40:583, June, 1938.

4. Gillies, H. D.: Plastic Surgery of the Face. *Oxford Univ. Press*, London, 1920.

5. Rubin, L. R.; Robertson, G. W., and Shapiro, R. H.: Use of Polyethylene in Reconstructive Surgery. *Plas. Recn. Surg.*, 3:586, Sept., 1948.

6. Rubin, L. R.: Polyethylene; A Three Year Study. *Plas. Recon. Surg.*, 7:131, Feb., 1951.

7. Tylman and Peyton: Acrylics and Other Dental Resins. Lippincott, 1946.

8. Shehan, J. Eastman: Use of Iliac Bone in Facial and Cranial Repair. *Amer. Jour. Surg.*, 52:55, April, 1941.

9. Blocher, S., and Weiss, L. R.: Use of Cancellous Bone in Repair and Defects About Jaws. *Ann. Surg.*, 123:622, April, 1946.

10. Macomber, W. B.; Shepard, R. A., and Crofut, Major V. E.: Mandibular Bone Grafts. *Plas. Recon. Surg.*, 3:570, Sept., 1948.

11. Converse, J. M.: Restoration of Facial Contour by Bone Grafts Introduced Through the Oral Cavity. *Plas. Recon. Surg.*, 6:295, Oct., 1950.

12. Newman, J.: Repair of Prognathic and Retruded Jaw. *Amer. Jour. Surg.*, 58-35, Oct., 1952.

13. IBID: Repair of Prognathic and Retruded Jaw. *Amer. Jour. Surg.*, 58:35, Oct., 1952.

14. GILLIES, H.: Ox Cartilage in Plastic Surgery. *Brit. Jour. Plas. Surg.*, 4-63-73, April, 1951.

15. MARINO, H., and NIKLISON, J.: Cartilago Bovino en Cirugia Plastica. *Prensa Med. Argen.*, 36:216, Feb., 1949.

16. NEW, G. B., and ERICH, J. B.: Method to Prevent Fresh Costal Cartilage Grafts from Warping. *Amer. Jour. Surg.*, 54:435-438, Nov., 1941.

17. AUFRICHT, GUSTAVE: Combined Nasal Plastic and Chin Plastic; Correction of Microgenia by Osteocartilaginous Transplant from Large Hump Nose. *Amer. Jour. Surg.*, 25:292, Aug., 1934.

860 Fifth Avenue.

THE AMERICAN OTORHINOLOGIC SOCIETY FOR PLASTIC SURGERY, Inc.

A Seminar on Plastic Surgery of the Head and Neck will be given by The American Otorhinologic Society for Plastic Surgery at the Sans Souci Hotel, Miami Beach, Florida, January 24 to January 28, 1955, inclusive. For further information address Louis Joel Feit, M.D., Secretary, 66 Park Ave., New York (16), N. Y.

KENFIELD SCHOLARSHIP.

The American Hearing Society announces March 1 as opening date for competition for the 1955 Kenfield Memorial Scholarship, an award made annually to a prospective teacher of lipreading. Application blanks may be obtained by writing to the society's national headquarters, 817 14th St., N.W., Washington 5, D. C.

Deadline for returning completed applications is May 1. They are to be mailed to Mrs. Dorothy J. Cornett, 4310 S.W. 14th St., Coral Gables 34, Fla.

Winner of the Kenfield Memorial award is entitled to take a teacher training course in lipreading from any school or university in the United States acceptable to the Teachers Committee. The scholarship is to be used within one year from the date of award.

ARTERIOVENOUS ANEURYSM OF THE INTERNAL CAROTID ARTERY AND CAVERNOUS SINUS, TREATED BY LIGATION OF EXTERNAL AND INTERNAL CAROTID ARTERIES.*

JACKSON A. SEWARD, M.D.,

New York, N. Y.

William Hunter in 1761, defined arteriovenous aneurysm as "The rupture simultaneously of an artery and a vein in which the blood flows directly into a neighboring vein or else is carried into such a vein by a connecting sac."

Arteriovenous aneurysm of the cavernous sinus and the internal carotid artery is a rare condition; however, many cases have been reported. In 1809 Travers described the first case of pulsating exophthalmos. In 1907 De Schweinitz and Holloway reported 69 cases. In 54 of these cases the exophthalmos was due to trauma, in 13 it was spontaneous, and in one it was the result of a tumor; the other cause was not given. The average age of the patients with exophthalmos due to trauma was 30 years, and the average age of the patients with spontaneous exophthalmos was 42 years.

In nine cases the hearing was impaired or lost; in one case the smell was markedly impaired; in one, the taste was impaired, and in five cases the ophthalmic branch of the Vth Cranial Nerve was involved. Pulsation was present in nearly all cases, but bruit could be heard in only nine.

The bruit can usually be controlled by pressure over the common carotid artery of the affected side. The continuity of the bruit indicates an arteriovenous aneurysm, and an interrupted bruit indicates a true aneurysm.

TREATMENT.

Reuchlin treated 68 cases with digital compression over the common carotid on the affected side and reported 15 cures and 53 failures.

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* Read at the Staff Conference of the Manhattan Eye, Ear, and Throat Hospital, New York City, Nov. 4, 1954.

Editor's Note: This ms. received in The Laryngoscope Office and accepted for publication, Nov. 8, 1954.

Dorrance and Loudenslager claimed ligation of the common carotid was the most satisfactory treatment. They reported that of 69 cases in which the internal carotid was ligated, hemiplagia occurred 13 times, permanent in four cases; in three, recovery was slow, and in the remaining six cases, hemiplagia was only temporary.

In a series of 82 cases, in which the common carotid artery was ligated, hemiplagia occurred in six cases. It was not permanent in any and was more than transient in only one case.

Various materials have been used for ligatures such as alloy steel wire, aluminum band, fascia lata, chromic catgut and silk.

CASE REPORT.

This is the report of a white male, 52 years of age, who walked into the admitting office of Bellevue Hospital, New York City, on the evening of July 17, 1944.

His chief complaint was of a swollen left eye which began to swell three days before and felt as though it would "pop out." Severe pain preceded the swelling and spread to the forehead. The pain gradually subsided, but the swelling of the eye persisted. There was impairment of vision in the left eye, and there was a buzzing in his left ear, both of which followed a blow on his jaw six or seven weeks previously.

On physical examination an exophthalmos of the left eye, with marked chemosis of the lower half of the conjunctiva, and paralysis of the left external rectus muscle was found. Vision in the left eye was impaired, and the left pupil did not react to light and accommodation. A bruit could be heard over the left eye, and the left temporal region and left mastoid and could be controlled by compressing the common carotid artery. His ears were normal, there was no infection in the nasal sinuses, and the blood pressure was 150/100. The blood count was normal and the Wassermann negative.

It was decided that ligation of the left common carotid artery offered the best chance of relief, and on July 25 this procedure was started under local anesthesia; but during the operation it was decided that the same results could be accomplished by ligating the external and internal carotids separately. Local anesthesia was selected because it would enable us to determine the effect of the occlusion of large arteries, but the patient was so agitated and confused from the morphine and hyocine which he received before being sent up to the operating room, that cooperation was not only lacking, but also antagonism was encountered. Hence the operation was interrupted while a general anesthetic was instituted. The common carotid was exposed and the bifurcation identified. One large black silk thread was placed around the internal carotid artery and another around the external carotid artery. By traction the flow of blood was stopped separately through each, then stopped through both simultaneously while the blood pressure, respiration and pulse were watched carefully. There being no marked change in either, these arteries were ligated separately with black silk.

No untoward signs were noted postoperatively and the left exophthalmos had receded 3½ mm. the next day. Buzzing in the left ear and the bruit had disappeared also by the next day. After one week the left external rectus muscle was functioning normally. The exophthalmos continued to recede slowly but had not entirely reached its normal position when the patient was discharged from the hospital, August 14, 1944.

SUMMARY.

A case was reported which presented the cardinal symptoms of arteriovenous aneurysm of the internal carotid artery and cavernous sinus, following trauma, namely, exophthalmos with pulsation and bruit which could be heard in the temporal region over the mastoid, and could be controlled by compression of the common carotid artery on the affected side.

Relief was accomplished by ligation of the internal and external carotid arteries. First day postoperatively, the exophthalmos had receded 3½ mm., and both bruit and tinnitus had disappeared.

REFERENCES.

De Schweinitz and Holloway: Pulsating Exophthalmos. W. B. Saunders Co., 1908.

Dorrance and Loudenslager: *Amer. Jour. Opthalmol.*, 27:1099, 1934.

Duke-Elder: Textbook of Ophthalmology. Pp. 5406-5419, C. V. Mosby Co., 1952.

Duane: Fuchs's Textbook of Ophthalmology. Pp. 837-838, Lippincott, 1923.

McNair, S. E.: Aneurysm Carotid-Exophthalmos, Without Pulsation Due to Arteriovenous Aneurysm. *Arch. Ophthalmol.*, 23:22-27, Jan., 1940.

Singleton, A. O.: Intracranial Arteriovenous Aneurysm. *Ann. Surg.*, 110:525-543, Oct., 1939.

Dorland: The American Illustrated Medical Dictionary. 21st Ed., p. 102, W. B. Saunders & Co.

Travers: *Med. Surg. Trans.* ii:1, 1809.

115 East 61st Street.

INDIANA UNIVERSITY MEDICAL CENTER

The Department of Otolaryngology, Indiana University School of Medicine, offers its annual Anatomical and Clinical Course in Otolaryngology, February 7 - 19, 1955. Applicants should address The Post-Graduate Office, Indiana University Medical Center, Indianapolis 7, Indiana.

THE CONTROL OF POSTOPERATIVE ADENOID BLEEDING WITH ADRENOSEM.*

CAPERS B. OWINGS, M.D.,

Germantown, Penna.

For the past six or seven years at Germantown Hospital we have had much more postoperative adenoid bleeding than we had years ago. In an attempt to check this trend we have: *1.* Used varied techniques and have attempted to remove all vestige of adenoid tissue under direct vision; *2.* Given ascorbic acid and vitamin "K"; *3.* Been very conservative about operating if there was any history or evidence of recent upper respiratory infection; *4.* Tried various preoperative medication.

In spite of these procedures, we have continued to have much too frequent adenoid ooze requiring postoperative manipulation, or the application of post nasal packs and sometimes blood replacement by transfusion. Bleeding from the tonsil fossa has not been more than average and has usually been controlled by suture on the table with an occasional secondary suture being necessary.

We have no knowledge as to why this adenoid bleeding has increased during the past few years. Some possible causes could be changes in the type or action of the various virus infections and the possible change in tissue response from the use of the various antibiotics. Other undetermined causes certainly must play a part.

During the Spring of 1954 Adrenosem (Massengill Co.) was called to my attention and since that time has become a routine preoperative medication. We have used 2½ mg. (½ ampule) intramuscularly, 15 minutes before anesthesia for children, and 5 mg. (1 ampule) for adults. We have not done a scientific study with controls and we have only 102 cases upon which this medication has been used. Before its use we had

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*Read at the Meeting of the Philadelphia Laryngological Society, Nov. 2, 1954.

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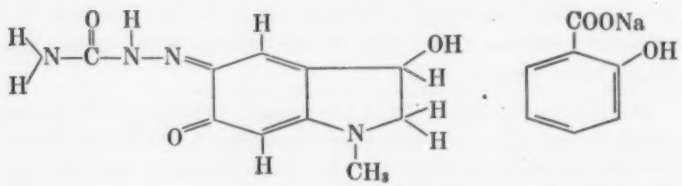
adenoid bleeding in approximately 10 per cent of all cases. Since its routine use we have had only one in 102 cases with three others who showed some bright red blood from the nose and mouth, who were then given 5 mg. (1 ampule) intramuscularly with prompt and complete control. We have also noticed that bleeding stopped more promptly on the operating table.

The 102 cases described do not include allergic individuals upon whom I have deferred T & A during the pollen season because of the possibility of increasing their allergic sensitivity. After frost, when this group will be operated upon, we will undobutedly show whether or not nasopharyngeal bleeding in this group can be controlled with this drug.

Adrenochrome has been known by research workers for a number of years to be a systemic hemostat, but it has been a laboratory curiosity because of its stability being limited to not more than four hours. Green and Richter described the monoxime and mentioned the semicarbazone. Both are stable but quite insoluble. When complexed with sodium salicylate, however, they are both stable and soluble. The amount of salicylic acid radical in this combination is so small that it can be ignored as a cause of bleeding.

Adrenosem is a synthetic chemical with the following formula:



Molecular weight: 396.337.

The manufacturers of this preparation claim that it has no sympathomimetic action, will not significantly raise blood pressure or affect the cardiac rate or volume. It has no effect on blood chemistry and does not interfere with the blood clotting mechanism or its compounds. The administration of vitamin "K" concomitantly will not interfere with its reac-

tion nor it with vitamin "K." It can be administered with heparin and anticoagulants.

When administered orally or intramuscularly (not to be used intravenously because it is hypertonic) it is absorbed rapidly, there are no cumulative effects, it is rapidly oxidized and eliminated completely in 12 hours. It is excreted 50 to 70 per cent through the kidneys with 25 to 30 per cent being excreted as extra indol which is thought to have been converted by bacterial action.

The manufacturers claim that Adrenosem appears to be specific for conditions characterized by increased capillary permeability. It checks bleeding from a capillary bed by causing correction of excessive permeability and increase in capillary resistance. This drug has no effect on large, severed arterioles or blood vessels. The use of antihistamine drugs during the previous 36 hours may retard its action.

It is not known exactly how Adrenosem works, but it is theoretically considered that the connective material between cells loses its elastic tone and that Adrenosem increases this tone. This is partly demonstrated by work on the cheek pouch of a hamster, in the Department of Biology of Boston, by Dr. Fulton. In the control animal mucous membrane was irritated with snake venom causing small hemorrhages and extreme capillary permeability. A 500 times magnification shows red cells escaping to surrounding tissue. Another animal was treated with Adrenosem and in 30 minutes the same amount of snake venom was used as an irritant. Microscopic examination showed intact capillary walls and blood cells coursing through the capillaries with only scant escape of erythrocytes.

Adrenosem has shown no cumulative effect on human subjects treated for over two years and no toxic effects attributable to the drug. There is a high index of therapeutic safety at the usual dosage levels, and there seem to be contraindications. It has been determined that the lethal $dose_{50}$ in experimental animals is 30.5 mg. per kilo of body weight.

We have used this drug only for control of postoperative adenoid ooze and in one case of familial telangiectasis and,

we believe, with excellent results. The manufacturers suggest that it has been of value in Idiopathic Purpura, Retinal Hemorrhage, Familial Telangiectasis, Epistaxis, Hemoptysis, Hematuria, Pulmonary Bleeding, Bleeding after X-ray Therapy, and in any surgical situation in which capillary bed bleeding might occur. This drug has not been shown to be of value in blood dyscrasias or in diseases or conditions where there is interference with the blood clotting mechanism.

BRONCHOESOPHAGOLOGY COURSE.

The next Bronchoesophagology Course to be given by the Temple University School of Medicine is scheduled for January 31st - February 11th, 1955, under the direction of Dr. Chevalier L. Jackson.

Interested registrants will please write directly to the Department of Laryngology and Bronchoesophagology, Temple University School of Medicine, 3400 North Broad Street, Philadelphia 40, Pa.

MEETING OF THE GEORGIA SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

The Georgia Society of Ophthalmology and Otolaryngology will meet March 11 - 12, 1955, at the General Oglethorpe Hotel, Savannah, Georgia.

The speakers will be: Dr. Francis H. Adler, Philadelphia; J. W. McCall, Cleveland; Dr. J. A. Hilger, St. Paul; Dr. Walter H. Fink, Minneapolis; Dr. James H. Allen, New Orleans; and Dr. P. E. Ireland, Toronto, Canada. For further details, address Alton V. Hallum, M.D., Secretary, 245 Doctors Bldg., Atlanta 3, Ga.

DIRECTORY OF OTOLARYNGOLOGIC SOCIETIES.

(Secretaries of the various societies are requested to keep this information up to date).

AMERICAN OTOLOGICAL SOCIETY.

President: Dr. D. E. Staunton Wishart, 170 St. George St., Toronto 5, Ontario, Canada.
Vice-President: Dr. Wm. J. McNally, 1509 Sherbrooke St., West Montreal 25, Canada.
Secretary-Treasurer: Dr. John R. Lindsay, 950 E. 59th St., Chicago 37, Illinois.
Editor-Librarian: Dr. Henry L. Williams, Mayo Clinic, Rochester, Minn.
Meeting: Hollywood Hotel, Hollywood, Fla., March 17 (afternoon), 18 (forenoon and afternoon), 19 (forenoon), 1955.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

President: Dr. Henry B. Orton, Newark, N. J.
First Vice-President: Dr. Jas. H. Maxwell, Ann Arbor, Mich.
Second-Vice-President: Dr. Clyde A. Heatley, Rochester, N. Y.
Secretary: Harry P. Schenck, Philadelphia, Pa.
Treasurer: Fred W. Dixon, Cleveland, Ohio.
Librarian-Historian: Dr. Bernard J. McMahon, St. Louis, Mo.
Meeting: Hollywood Hotel, Hollywood, Fla., March 13-14, 1955.

AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY, INC.

President: Dr. Kenneth M. Day, 121 University Pl., Pittsburgh, Pa.
President-Elect. Dr. Dean M. Lierle, Iowa City, Iowa.
Secretary: Dr. C. Stewart Nash, 277 Alexander St., Rochester, N. Y.
Eastern Section Meeting, Friday, January 7, 1955, Philadelphia, Pa., Hotel Warwick.
Triological Council Meeting, Saturday, January 8, 1955, New York City, The Waldorf-Astoria.
Western Section Meeting, Saturday - Sunday, January 15 - 16, 1955, Los Angeles, Cal., The Town House.
Southern Section Meeting, Saturday, January 22, 1955, Charlottesville, Va., Medical School Auditorium.
Middle Section Meeting, Monday, January 24, 1955, Detroit, Mich., Sheraton-Cadillac Hotel.
Meeting: Hollywood Hotel, Hollywood, Fla., March 15-16-17, 1955, morning only.

AMERICAN MEDICAL ASSOCIATION, SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY.

Chairman: Dr. F. W. Davison, Danville, Pa.
Vice-Chairman: Dr. Guy L. Boyden, Portland, Ore.
Secretary: Dr. Hugh A. Kuhn, Hammond, Ind.

AMERICAN ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Dr. Algernon B. Reese, 73 East 71st St., New York 21, N. Y.
Executive Secretary: Dr. William L. Benedict, Mayo Clinic, Rochester, Minn.
Meeting: Palmer House, Chicago, Ill., October 9-15, 1955.

AMERICAN BOARD OF OTOLARYNGOLOGY.

Meeting: Hotel Marshall, Richmond, Va., March 6-10, 1955.
Palmer House, Chicago, Ill., October, 1955.

AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION.

President: Dr. Clyde A. Heatley, 11 No. Goodman St., Rochester, N. Y.
Secretary: Dr. F. Johnson Putney, 1719 Rittenhouse Square, Philadelphia, Pa.
Meeting: Hollywood Beach Hotel, Hollywood, Fla., March 15-16, 1955, afternoon only.

PUGET SOUND ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Dr. Clifton E. Benson, Bremerton, Wash.
President-Elect: Dr. Carl D. F. Jensen, Seattle, Wash.
Secretary: Dr. Willard F. Goff, 1215 Fourth Ave., Seattle, Wash.

THE SECTION OF OTOLARYNGOLOGY OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Chairman: Dr. John Louzan.
Vice-Chairman: Dr. Willard B. Walters.
Secretary: Dr. Jack L. Levine.
Treasurer: Dr. Russell S. Page, Jr.
Meetings are held on the third Tuesday of October, November, March and May, 7:00 P.M.
Place: Army and Navy Club, Washington, D. C.

GEORGIA SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

Meeting: General Oglethorpe Hotel, Savannah, Ga., March 11-12, 1955.

THE GREATER MIAMI EYE, EAR, NOSE AND THROAT SOCIETY.

President: Dr. Ralph Kirsch, 1345 N. Bayshore Drive, Miami, Fla.
Vice-President: Dr. Garland Johnson, Blount Bldg., Fort Lauderdale, Fla.
Secretary: Dr. James H. Mendel, Jr., 7241 Red Road, Miami, Fla.
Meeting: Quarterly, at Seven Seas Restaurant, February, May, October, and December.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

President: Dr. Norman Leshin, 55 East Washington St., Chicago, Ill.
Vice-President: Dr. Henry B. Perlman, 950 East 59th St., Chicago, Ill.
Secretary-Treasurer: Dr. Stanton A. Friedberg, 122 So. Michigan Ave., Chicago, Ill.
Meeting: First Monday of each Month, October through May.

THE LOUISIANA-MISSISSIPPI OPHTHALMOLOGICAL AND OTOLARYNGOLOGICAL SOCIETY.

President: Dr. W. L. Hughes, Lamar Life Bldg., Jackson, Miss.
Vice-President: Dr. Ralph H. Riggs, 1513 Line Ave., Shreveport, La.
Secretary: Dr. Edley H. Jones, 1301 Washington St., Vicksburg, Miss.

OTOSCLEROSIS STUDY GROUP.

President: Dr. Gordon D. Hoople, 1100 East Genesee St., Syracuse, N. Y.
Secretary: Dr. Lawrence R. Boies, Med. Arts Bldg., Minneapolis 2, Minn.
Meeting: Palmer House, Chicago, Ill., Oct. 9, 1955.

AMERICAN SOCIETY OF OPHTHALMOLOGIC AND OTOLARYNGOLOGIC ALLERGY.

President: Dr. F. Lambert McGannon, 14595 Madison Ave., Lakewood 9, Ohio.
Secretary-Treasurer: Dr. Michael H. Barone, 468 Delaware Ave., Buffalo 2, N. Y.
Meeting: Palmer House, Chicago, Ill., October, 1955.

PAN AMERICAN ASSOCIATION OF OTO-RHINO-LARYNGOLOGY AND BRONCHO-ESOPHAGOLOGY.

President: Dr. J. M. Tato, Azcuenaga 235, Buenos Aires, Argentina.
Executive Secretary: Dr. Chevalier L. Jackson, 1901 Walnut St., Philadelphia 3, Pa., U. S. A.
Meeting: Fifth Pan American Congress of Oto-Rhino-Laryngology and Broncho-Esophagology.
President: Dr. J. H. Font, Medical Arts Bldg., San Juan, P. R.
Time and Place: 1956, Puerto Rico.

MISSISSIPPI VALLEY MEDICAL SOCIETY.

President: Dr. Arthur S. Bristow, Princeton, Mo.
Secretary-Treasurer: Dr. Harold Swanberg, Quincy, Ill.
Assistant Secretary-Treasurer: Dr. Jacob E. Reisch, Springfield, Ill.
Meeting:

THE VIRGINIA SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Dr. G. S. Fitz-Hugh, Charlottesville, Va.
President-Elect: Dr. H. L. Mitchell, Lexington, Va.
Vice-President: Dr. Marion K. Humphries, Charlottesville, Va.
Secretary-Treasurer: Dr. L. B. Shoppard, 301 Medical Arts Bldg., Richmond, Va.
Spring Meeting: Natural Bridge Hotel, Natural Bridge, Va., May 7-8, 1955.

LOS ANGELES SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Harold Owens, M.D.
Secretary-Treasurer: Robert A. Norene, M.D.
Chairman of Section on Ophthalmology: Sol Rome, M.D.
Secretary of Section on Ophthalmology: Wendell C. Irvine, M.D.
Chairman of Section on Otolaryngology: Max E. Pohlman, M.D.
Secretary of Section on Otolaryngology: Herschel H. Burston, M.D.
Place: Los Angeles County Medical Association Building, 1925 Wilshire Boulevard, Los Angeles 57, Calif.
Time: 6:00 P.M., first Thursday of each month from September to June inclusive—Ophthalmology Section. 6:00 P.M., fourth Monday of each month from September to June inclusive—Otolaryngology Section.

AMERICAN OTORHINOLOGIC SOCIETY FOR THE ADVANCEMENT OF PLASTIC AND RECONSTRUCTIVE SURGERY.

President: Dr. Harry Nievert, 555 Park Ave., New York (21), N. Y.
Secretary: Dr. Louis Joel Fleit, 66 Park Ave., New York (16), N. Y.
Meeting:

NORTH CAROLINA EYE, EAR, NOSE AND THROAT SOCIETY.

President: Dr. Cecil Swann, Asheville, N. C.
Secretary and Treasurer: Dr. Geo. B. Ferguson, Durham, N. Car.
Meeting: Jointly with the South Carolina Society of Ophthalmology and Otolaryngology, Columbia, So. Car. Sept. 12-14, 1955.

SOUTH CAROLINA SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY

President: Dr. John McLean, Greenville, S. Car.
Vice-President: Dr. James M. Timmons.
Secretary-Treasurer: Dr. Roderick Macdonald, Rock Hill, S. Car.
Meeting: Jointly with North Carolina Eye, Ear, Nose and Throat Society, Columbia, S. Car. Sept. 12-14, 1955.

PACIFIC COAST OTO-OPHTHALMOLOGICAL SOCIETY.

President: Dr. Leland G. Hunnicutt, 98 N. Madison Ave., Pasadena, Calif.
Secretary-Treasurer: Dr. John F. Tolan, 3419 47th Ave., Seattle (5), Wash.
Meeting:

THE RESEARCH STUDY CLUB OF LOS ANGELES, INC.

Chairman: Dr. Isaac H. Jones, 635 S. Westlake, Los Angeles, Calif.
Treasurer: Dr. Pierre Violé, 1930 Wilshire Blvd., Los Angeles, Calif.
Program Chairmen:
Otolaryngology: Dr. Leland G. Hunnicutt, 98 N. Madison Ave., Pasadena, Calif.
Ophthalmology: Dr. Harold F. Whalman, 727 W. 7th St., Los Angeles, Calif.
Mid-Winter Clinical Convention annually the last two weeks in January at Los Angeles, Calif.

FLORIDA SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Dr. Chas. C. Grace, 145 King St., St. Augustine, Fla.
President-Elect: Dr. Jos. W. Taylor, 706 Franklin St., Tampa, Fla.
Secretary-Treasurer: Dr. Carl S. McLemore, 1217 Kuhl Ave., Orlando, Fla.

THE PHILADELPHIA LARYNGOLOGICAL SOCIETY.

President: Dr. William J. Hitschler.
Vice-President: Dr. Chevalier L. Jackson.
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Historian: Dr. Herman B. Cohen.
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SOUTHERN MEDICAL ASSOCIATION, SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY.

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Vice-Chairman: Dr. K. W. Cosgrove, 111 E. Capitol Ave., Little Rock, Ark.
Secretary: Dr. F. A. Holden, Medical Arts Bldg., Baltimore, Md.
Meeting:

WEST VIRGINIA ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Dr. James K. Stewart, Wheeling, W. Va.
Secretary-Treasurer: Dr. Frederick C. Reel, Charleston, W. Va.

CENTRAL ILLINOIS SOCIETY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

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President-Elect: Dr. Phil R. McGrath, Peoria, Ill.
Secretary-Treasurer: Dr. Alfred G. Schultz, Jacksonville, Ill.

DALLAS ACADEMY OF OPHTHALMOLOGY AND OTOLARYNGOLOGY.

President: Dr. Oscar Marchman, Jr., Dallas, Texas.
Secretary-Treasurer: Dr. Morris F. Waldman, Dallas, Texas.

BALTIMORE NOSE AND THROAT SOCIETY

Chairman: Dr. Albert Steiner, 1308 Eutaw Pl., Baltimore, Md.
Secretary-Treasurer: Dr. Walter E. Loch, 1039 No. Calvert St., Baltimore, Maryland.

SOCIEDAD DE OTO-RINO-LARINGOLOGIA, COLEGIO MEDICO DE EL SALVADOR, SAN SALVADOR, C. A.

President: Dr. Salvador Mixco Pinto.
Secretary: Dr. Daniel Alfredo Alfaro.
Treasurer: Dr. Antonio Pineda M.

CANADIAN OTOLARYNGOLOGICAL SOCIETY
SOCIETE CANADIENNE D'OTOLARYNGOLOGIE

President: Dr. G. Edward Tremble, 1390 Sherbrooke St., West, Montreal, P. Q.
Secretary: Dr. G. Arnold Henry, 170 St. George St., Toronto, Ontario.
Meeting: Bigwin Inn, Lake of Bays, Muskoka, Ontario. June 16 to June 18, 1955.

MEXICAN ASSOCIATION OF PLASTIC SURGEONS.

President: Dr. Cesar LaBoide, Mexico, D. F.
Vice-President: Dr. M. Gonzalez Ulloa, Mexico, D. F.
Secretary: Dr. Juan de Dios Peza, Mexico, D. F.

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Secretario del Interior: Dr. Eduardo Casterán.
Sub-Secretario del Interior: Dr.Atilio Viale del Carril.
Secretario Tesorero: Dr. Vicente Carri.
Sub-Secretario Tesorero: Dr. José D. Suberviola.

ASOCIACIGN DE OTO-RINO-LARINGOLOGIA DE BARCELONA, SPAIN.

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Secretario: Dr. Jorge Perelló, 319 Provenza, Barcelona.
Vice-Secretario: Dr. A. Pinart.
Vocal: Dr. J. M. Ferrando.

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Vicepresidente: Dr. César Cabrera Calderin.
Secretario: Dr. José Xirau.
Tesorero: Dr. Alfredo M. Petit.
Vocal: Dr. José Gross.
Vocal: Dr. Pedro Hernández Gonzalo.

INTERNATIONAL BRONCHOESOPHAGOLOGICAL SOCIETY.

President: Dr. Andre Soulas, Paris, France.
Secretary: Dr. Chevalier L. Jackson, 1901 Walnut St., Philadelphia 3, Pa. U. S. A.
Meeting:
Time and Place:

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